

In the Specification:

Replace the paragraph beginning at page 2, line 7 with the following paragraph:

-- Thus, the present invention relates to a process ~~according to the introductory part of the accompanying claim 1~~ for manufacturing fine iron based powders such as iron or steel powders. The process is especially characterized ~~by the steps of: in what is specified in the characterizing portion of said claim.~~

- (a) providing an iron based, fragmented raw material, finely divided when applicable;
- (b) transforming raw material to nitride by means of ammonia gas to provide a brittle nitridic material;
- (c) milling the nitridic material to particle sizes desired, when applicable; and
- (d) denitriding the milled nitridic material to a fine iron based powder.

Replace the paragraph beginning at page 2, line 11 with the following paragraph:

-- Further, the present invention relates to a plant ~~according to the introductory part of the accompanying claim 15~~ for manufacturing fine iron based powders such as iron or steel powders. The plant is especially characterized ~~by including: in what is specified in the characterizing portion of claim 15.~~

- (a) means for containing a fragmented iron based raw material;

- (b) transformation means for providing ammonia gas to said raw material to transform the raw material substantially totally to nitride to provide a brittle nitridic material;
- (c) milling means, when applicable, for milling the nitridic material to particle sizes desired; and
- (d) means for denitriding the milled nitridic material to a fine iron based powder.

Replace the paragraph beginning at page 2, line 15 with the following paragraph:

-- The invention further relates to a fine iron or steel powder ~~according to the introductory part of the accompanying claim 29. The powder is especially characterized in what is specified in the characterizing portion of claim 29~~ produced by the process of the invention.

Replace the paragraph beginning at page 5, line 28 with the following paragraph:

-- The hydrogen treatment is normally preferred since it also leads to the reduction of iron oxides and allows comparatively low temperatures in order to ~~minimise~~ minimize agglomeration of the resulting powder. Thus, there happens to be almost no agglomeration at all at temperatures below about 350 °C. --

Replace the paragraph beginning at page 6, line 4 with the following paragraph:

-- 8 kilograms of an iron powder ( $d_{89} = 300 \mu\text{m}$ , 0,66 % O and 0,042 % C) was nitrided during 34 hours using a flow of 3 ~~litres~~ liters  $\text{NH}_3$  per minute at 525 °C. An ~~analyses~~ analysis showed that the nitrided powder had a nitrogen content of about 7 %. --

Replace the paragraph beginning at page 6, line 10 with the following paragraph:

-- 600 grams of nitrided iron powder from Example 1 was milled by jet milling technique by means of a laboratory jet mill to a fine powder with  $d_{50} = 3 \mu\text{m}$ . Milling of another nitrided powder (nitrided tool steel) by means of the laboratory jet mill revealed that the productivity is a function of the mean particle size of the milled material:

[[0,1]] 0.1 kilogram per hour for  $d_{50} = 3 \mu\text{m}$  and [[3,2]] 3.2 kilogram per hour for  $d_{50} = 20 \mu\text{m}$ , respectively. --

Replace the paragraph beginning at page 6, line 20 with the following paragraph:

-- [[0,8]] 0.8 grams iron nitride (7 % N and [[1,4]] 1.4% O) with  $d_{50} = 3 \mu\text{m}$  was filled into a cup with  $\varnothing = 4$  ~~millimetres~~ millimeters to a bed depth = 7 ~~millimetres~~ millimeters. After a treatment at 300 °C using a flow of 50 ~~millilitres~~ milliliters  $\text{H}_2$  (g) per minute in 90 minutes the material was still a fine powder, [[i e]] i.e. no agglomeration occurred. The powder was not pyrophoric after the treatment. An ~~analyses~~ analysis of the powder showed that it contained [[0,28]] 0.28% N and [[0,74]] 0.74% O. --

Replace the paragraph beginning at page 5, line 28 with the following paragraph:

-- Finely milled iron nitride with  $d_{50} =$  about 10  $\mu\text{m}$  was mixed with a somewhat coarser master alloying powder of a stainless composition (316L/MA: 38 % Ni, [[7,2]] 7.2% Mo, [[1,0]] 1.0% Si, [[0,5]] 0.5% Mn, bal. Cr) to a mixture ratio of ~~68.9/31.1~~ 68.9/31.1. The mixture was heated in hydrogen gas to sintering temperature, 1300 °C, the holding time being 60 minutes. The sintered samples were ~~analysed~~ analyzed chemically and metallographically. The chemical analysis showed that the remaining content of nitrogen was below 150 ppm and of oxygen below 300 ppm. The metallographic study showed that a closed porosity had been achieved.

The pore size was below 5  $\mu\text{m}$  and the volume fraction of pores was below 1 %, Fig. 2. Thus, the results show that finely milled iron nitride powder can replace carbonyl iron powder as a sintering active powder for the production of high alloy steel components. --